In the Claims:

1. (Original) Method for the simultaneous determination of cell proliferation inhibition activity and cell toxicity activity of a substance comprising

a) contacting a proliferating mammalian cell sample that is present in a predetermined amount with said substance in at least two different predetermined concentrations;

b) contacting said cell sample with a first fluorescence dye that specifically stains either dead cells or viable cells and optionally with a second fluorescence dye staining all cells;

c) adding to said cell sample a predetermined amount of latex particles with a size ranging from about 1 to about 20 µm and optionally staining said latex particles with a third fluorescence dye;

d) determining the ratio of the amount of total cells to the amount of latex particles in said cell sample;

e) determining with the results of step d) and by flow cytometric analysis in said sample

- the number of dead cells or viable cells by fluorescence light emitted by said first fluorescence dye at a first wavelength;
- the number of total cells per volume by scatter light at a first angle or alternatively by fluorescence light emitted by said second fluorescence dye at a second wavelength;
- the number of latex particles per volume by scatter light at a second angle or alternatively by fluorescence light emitted by said third fluorescence dye at a third wavelength;

f) and determining with the results of step d) and e) the cell proliferation activity and toxicity of said substance.

2. (Original) The method of claim 1 wherein the cell sample is present as a cell suspension or as adherent cells.

3. (Original) The method of claim 1 wherein the dead cells are stained specifically by a fluorescence dye and the number of latex particles and cells is measured by differential side scatter light and forward scatter light.

4. (Currently Amended) The method of claim 3, wherein the ~~cells~~ cell sample is ~~are~~ human $CD34^+$ progenitor cells.

5. (Original) The method of claim 1 wherein the cells are cultivated in parallel in multiple devices and the samples are transferred to the flow cytometric analysis apparatus by automated pipetting.